

Listing of Claims

This listing of claims will replace all prior versions and listings of claims in the application.

Please amend claims 20 and 40.

1. (Previously Presented) A recombinant expression construct comprising at least one regulated promoter operably linked to a first nucleic acid encoding a polypeptide having at least 95% identity to a human adenine translocator polypeptide 3 (ANT3) polypeptide comprising the amino acid sequence set forth in SEQ ID NO:33.

2. (Original) The expression construct of claim 1 further comprising at least one additional nucleic acid sequence that regulates transcription.

3. (Original) The expression construct of claim 2 wherein the additional nucleic acid sequence that regulates transcription encodes a repressor of said regulated promoter.

4. (Previously Presented) The expression construct of claim 1 wherein the polypeptide comprises the amino acid sequence set forth in SEQ ID NO:33.

5.-7. (Cancelled)

8. (Previously Presented) An expression construct according to claim 1 wherein the polypeptide is expressed as a fusion protein with a polypeptide product of a second nucleic acid sequence.

9. (Original) The expression construct of claim 8 wherein the polypeptide product of said second nucleic acid sequence is an enzyme.

10. (Original) The expression construct of claim 8 wherein said fusion protein localizes to membranes.

11. (Original) The expression construct of claim 10 wherein said membranes are mitochondrial membranes.

12. (Original) An expression construct according to claim 1 wherein the adenine nucleotide translocator polypeptide is expressed as a fusion protein with at least one product of a second nucleic acid sequence encoding a polypeptide cleavable by a protease, said adenine nucleotide translocator polypeptide being separable from the fusion protein by cleavage with the protease.

13. (Original) A host cell comprising a recombinant expression construct according to claim 1.

14. (Original) A host cell according to claim 13 wherein the host cell is a prokaryotic cell.

15. (Original) A host cell according to claim 13 wherein the host cell is a eukaryotic cell.

16. (Original) The host cell of claim 15 wherein the eukaryotic cell is selected from the group consisting of a yeast cell, an insect cell and a mammalian cell.

17. (Original) The host cell of claim 16 wherein the insect cell is selected from the group consisting of an Sf9 cell and a *Trichoplusia ni* cell.

18. (Original) A host cell according to claim 13 that lacks at least one isoform of an endogenous adenine nucleotide translocator.

19. (Original) A host cell according to claim 13 in which expression of at least one gene encoding an endogenous adenine nucleotide translocator isoform is substantially impaired.

20. (Currently Amended) A recombinant expression construct comprising at least one regulated promoter operably linked to a nucleic acid molecule comprising a first nucleic acid sequence and a second nucleic acid sequence, said first nucleic acid sequence encoding a polypeptide having at least 95% identity to a human adenine nucleotide translocator 3 (ANT3) polypeptide comprising an amino acid sequence set forth in SEQ ID NO:33, wherein said polypeptide is expressed as a fusion protein with a polypeptide product of said second nucleic acid sequence.

21. (Original) The expression construct of claim 20 wherein the polypeptide product of said second nucleic acid sequence is an enzyme.

22. (Original) The expression construct of claim 20 wherein said fusion protein localizes to membranes.

23. (Original) The expression construct of claim 22 wherein said membranes are mitochondrial membranes.

24. (Original) The expression construct of claim 20 further comprising at least one additional nucleic acid sequence that regulates transcription.

25. (Original) The expression construct of claim 24 wherein the additional nucleic acid sequence that regulates transcription encodes a repressor of said promoter.

26. (Previously Presented) The expression construct of claim 20 wherein the polypeptide comprises the amino acid sequence set forth in SEQ ID NO:33.

27. – 29. (Cancelled)

30. (Original) An expression construct according to claim 20 wherein the adenine nucleotide translocator polypeptide is expressed as a fusion protein with at least one product of a second nucleic acid sequence encoding a polypeptide cleavable by a protease, said adenine nucleotide translocator polypeptide being separable from the fusion protein by cleavage with the protease.

31. (Original) A host cell comprising a recombinant expression construct according to claim 20.

32. (Original) A host cell according to claim 31 wherein the host cell is a prokaryotic cell.

33. (Original) A host cell according to claim 31 wherein the host cell is a eukaryotic cell.

34. (Original) The host cell of claim 33 wherein the eukaryotic cell is selected from the group consisting of a yeast cell, an insect cell and a mammalian cell.

35. (Original) The host cell of claim 34 wherein the insect cell is selected from the group consisting of an Sf9 cell and a *Trichoplusia ni* cell.

36. (Previously Presented) A host cell according to claim 31 that lacks at least one isoform of an endogenous adenine nucleotide translocator.

37. (Previously Presented) A host cell according to claim 31 in which expression of at least one gene encoding an endogenous adenine nucleotide translocator isoform is substantially impaired.

38. (Original) A recombinant expression construct according to either claim 1 or claim 20 wherein the expression construct is a recombinant viral expression construct.

39. (Original) A method of producing a recombinant adenine nucleotide translocator polypeptide, comprising:

culturing a host cell comprising a recombinant expression construct comprising at least one regulated promoter operably linked to a first nucleic acid encoding an adenine nucleotide translocator polypeptide.

40. (Currently Amended) A method of producing a recombinant adenine nucleotide translocator 3 (ANT3) polypeptide, comprising:

culturing a host cell comprising a recombinant expression construct comprising at least one regulated promoter operably linked to a nucleic acid molecule comprising a first nucleic acid sequence and a second nucleic acid sequence, said first nucleic acid sequence encoding a polypeptide having at least 95% identity to a human ANT3 polypeptide comprising a sequence set forth in SEQ ID NO:33, wherein the ANT3 polypeptide is expressed as a fusion protein with a polypeptide product of said second nucleic acid sequence.

41. (Original) A method of producing a recombinant adenine nucleotide translocator polypeptide, comprising:

culturing a host cell infected with the recombinant viral expression construct of claim 38.

42. – 112. (Cancelled)